

SECTION 10: OTHER MANAGEMENT PROGRAMS

This section describes additional mechanisms and programs that will be further evaluated to determine nutrient reductions.

Shoreline Erosion Advisory Service

The Shoreline Erosion Advisory Service (SEAS) was created in 1980 by the Virginia General Assembly. The program provides technical assistance to private landowners and local, state and federal agencies owning property experiencing shoreline erosion in tidal Virginia. The SEAS services include: site investigations, written reports, plan reviews, construction inspections, permitting assistance and education.

SEAS staff provides an advisory report that includes erosion control recommendations that are unbiased and tailored to the individual site. The erosion control recommendations may include non-structural or structural protective measures. The non-structural recommendations are provided in low wave energy areas and generally include vegetative practices. Specific planting recommendations are given to establish or enhance vegetation on upland banks as well as fringe marshes. However, structural solutions are often required to abate the shoreline erosion problem in medium to high wave energy areas. These solutions include bulkheads, riprap revetments, sills, breakwaters and groins. Vegetative measures may also be included with the sills, breakwaters and groins.

The implementation of a structural control measure requires a permit(s) from the appropriate regulatory agency. Detailed plans must be prepared. SEAS staff provides minimum design criteria and provides plan review services for designs before they are submitted to the regulatory agencies for review and approval. The staff review provides the property owner with a degree of assurance that the design incorporates sound engineering practices. Once a shoreline project is permitted, SEAS staff can also provide construction inspections for projects that were previously reviewed.

Code Reference:

§ 10.1-701 Code of Virginia

Virginia Clean Marina Program

The Virginia Clean Marina Program (VCMP) is a voluntary program that promotes BMPs at marinas and boatyards to reduce the environmental impacts of daily operations. The VCMP was implemented in 2001 and is housed at the Virginia Institute of Marine Science, Marine Advisory Services in partnership with Virginia Sea Grant. Guidance is provided to marinas and boatyards on reducing nonpoint source pollution. Participating facilities are required to put into practice 100 percent of the legal requirements and 80 percent of the program recommended BMPs outlined in the Clean Marina Guidebook. An initial self assessment by the owner/operator is followed by a site visit from the clean marina staff and then a final review by the Marina Technical and Environmental Advisory Committee (MTEAC). If the MTEAC members agree the facility meets the regulatory and voluntary components of the VCMP program, the marina or boatyard is designated a Clean Marina.

There are ten primary management areas outlined in the guidebook. These areas include: siting and design considerations for new and expanding marinas, marina management, emergency planning, petroleum control, sewage and grey water, waste containment and disposal, vessel maintenance and repair, stormwater management, habitat and species, and boater education.

Program BMP recommendations include; minimizing impervious areas to reduce surface runoff, maintenance of vegetative buffers and collect all maintenance equipment and debris in areas outside of the resource protection area (RPA) as well as conducting all maintenance activities outside of the RPA. All BMPs are designed to filter nutrients and capture any debris and sedimentation before it reaches the waterways or prevent pollution occurrence.

There are currently 65 certified Clean Marinas and 34 marinas that have pledged to work towards becoming certified. The certified marinas are revisited every three years for recertification and to note any additional BMPs that the marina has implemented. The goal of the VCMP is clean water so any level of participation in the program is encouraged and welcome.

No Discharge Zone Program

This EPA program, administered by the Department of Environmental Quality in Virginia can be used as a tool to help restore the quality of shellfish waters where there is poor tidal flushing and smaller volumes of water for waste assimilation. Virginia code was established to define the tidal creeks of the Commonwealth as a "no discharge zone" on July 1, 2009. DEQ has begun the process of establishing No-Discharge Zones (NDZ) in all tidal creeks draining into the Virginia portion of the Chesapeake Bay or its major tributaries.

NDZ designation in a waterbody restricts vessels from discharging waste even after it has been treated by approved marine sanitation devices (MSDs). Under a NDZ designation, vessels operating in smaller tidal bay tributaries would be prohibited from discharging treated waste (discharge of untreated waste is already illegal nationwide). NDZ designation also results in an expansion of enforcement authority and resources to support enforcement actions. EPA designation of NDZs is contingent on an established need for protection, availability of sufficient waste disposal alternatives (i.e. pump-outs), and local stakeholder support.

Though typically used to target bacterial impairments, an NDZ provides some benefit to the reduction of nutrients, particularly nitrogen. The educational benefits include informing boaters about the availability of sanitary pump-out facilities in an area and the detrimental impact that overboard discharge of human waste can have on water quality.

Currently, DEQ is working with local planners to collect the necessary data and apply for the NDZ designation for the tidal creeks of the Northern Neck of Virginia. Funding for this pilot project has been made available through the federal stimulus package of 2009 and it is expected that the methodology will be more refined to be used for designations. At present, there is one staff person at DEQ to administer the program. No-Discharge Zones currently exist in the Lynnhaven River and Deltaville for Virginia's Bay watershed.

Code Reference:

§62.1-44.33, Regulation 9 VAC 25-71

Wildlife Management

It is the mission of the VDGIF to maintain optimum populations of all species to serve the needs of the Commonwealth.

With regard to deer population management, the 2006-2015 Virginia Deer Management Plan directs the Virginia Department of Game and Inland Fisheries to manage deer populations on a management unit (i.e., county or city) basis using regulated hunting. The density and health of Virginia's deer herd is being appropriately managed through this mechanism. Although frequently described as overpopulated, most of Virginia's deer herds are managed through regulated hunting at moderate to low population densities, in fair to good physical condition, and below the biological carrying capacity of the habitat. However, deer herds are above cultural carrying capacity in a number of areas of the state. Regulations on deer hunting are designed purposefully to apply to large areas (i.e., counties), be as simple and uniform as possible, and avoid confusion. When setting regulations on this basis, one assumes that deer habitats, deer densities, hunter pressures, and public demands are similar over the entire affected area. However, these factors often vary within a management unit. To meet the unique management needs and challenges in such areas, alternative site-specific management regulations and programs must be developed and implemented. Programs currently in existence include Deer Management Assistance Program [DMAP], Damage Control Assistance Program [DCAP], Deer Population Reduction Program [DPOP], and out-of season kill permit.

Resident Canada Goose populations are also managed in Virginia. The resident Canada goose population increased substantially in Virginia during the 1980's and 1990's, and peaked at around 265,000 geese in the late 1990's. Specific management programs were initiated in the 1990's to help control and manage this population. Special September hunting seasons were initiated in 1993 and special late hunting seasons (January – February) were initiated in 1996. These seasons were expanded over the past 10-15 years and have resulted in a 400% increase in the Canada goose harvest during this time period, from around 13,000 birds to 66,000 birds annually. In addition, other control measures have been implemented to help control goose numbers in areas such as residential, urban and industrial areas where hunting is not effective. Direct population control is a program conducted by the U.S. Department of Agriculture, in consultation with VDGIF that is used to remove and destroy Canada geese that are causing problems that are not being solved with other control techniques. These actions have reduced the Resident Canada goose population in the state from over 265,000 in the late 1990's to around 147,000 in 2010. The goal of this program is to manage the resident Canada goose population at a level that will provide aesthetic and recreational benefits to the citizens of the state while reducing economic damages, alleviating nuisance issues, and minimizing threats to human health and safety. A population objective of 125,000-150,000 geese statewide should be maintained to accomplish these goals. On a local level, goose numbers may need to be further reduced in specific areas to address specific conflicts or concerns.

Code Reference:

Title 29.1, Code of Virginia and Virginia Administrative Code Title 4 VAC Agency NO. 15.

Restoration of Oysters and other filter feeders

Increasing Virginia's stock of natural filter feeders, such as oysters, not only provides a valuable fishery but will also help clean the Chesapeake Bay by filtration. Various studies and EPA's modeling have demonstrated that increasing the biomass of filter feeders may produce improvements. Virginia is committed to increasing the population of these natural filters and believes credit for filter feeder restoration and the associated nutrient removal should be recognized in implementing the WIP.

Reduction in Air Deposition

Modeling has estimated that atmospheric sources account for about one third of the nitrogen that reaches the Bay, and that much of this load originates from outside the Chesapeake Bay watershed. As described in general terms in EPA's July 1 letter, additional nitrogen reductions realized through more stringent air pollution controls at the jurisdictional level, beyond minimum federal requirements, may be credited to individual jurisdictions. Virginia expects potentially significant air reductions during the implementation of this plan and will work with EPA to determine the associated nitrogen reductions to water.

Implementation of Alternative Technologies

To achieve the additional nutrient reductions included in the draft TMDL equitably and cost-effectively, the Commonwealth will evaluate, and implement as appropriate and warranted, emerging alternative technologies that are shown to be effective. Examples of potential technologies that are being given serious consideration include Algal Turf Scrubber[®] and floating wetlands.